WHAT IS CLAIMED IS:

1. An image display apparatus comprising: a first substrate provided with a plurality of electron emitting elements in a vacuum container; a second substrate positioned opposite to said first substrate in said vacuum container, said second substrate being irradiated with electrons emitted from said electron emitting elements; at least one spacer disposed on either one of said first and second substrates to provide an atmospheric pressure resistant structure of said vacuum container, said spacer being interposed between said first and second substrates and having a longitudinal direction in a direction substantially perpendicular to an opposing direction of said first and second substrates; and a lateral wall positioned inside an external periphery of at least either one of said first and second substrates to provide a sealed structure of said vacuum container,

wherein a first support member for supporting said spacer is provided outside an image display area which is formed between an area of said electron emitting elements of said first substrate and an electron-irradiated area of said second substrate, while a second support member is provided outside said image display area of either one of said first and second substrates, and wherein said first support

member and said second support member are joined together.

2. The image display apparatus according to claim 1, wherein said first and second support members consist of members having conductivity.

3. The image display apparatus according to claim 2, wherein said first support member and said second support member are joined by welding.

4. The image display apparatus according to claim 2, wherein said first support member and said second support member are joined by a first joining member.

5. The image display apparatus according to claim 4, wherein said first joining member is selected from a group of a solder material, a conductive adhesive and a low-melting metal material.

6. The image display apparatus according to claim 2, wherein an electrode formed on a surface of said spacer and said first support member are electrically joined.

7. The image display apparatus according to

claim 6, wherein the electrode formed on a surface of said spacer and said first support member are electrically joined via a conductive adhesive.

8. The image display apparatus according to claim 6, wherein the electrode formed on a surface of said spacer and said first support member are electrically joined by a contact of a contact portion having spring characteristics, provided on said first support member.

9. The image display apparatus according to claim 2, wherein an electrode formed on either one of said first and second substrate, bearing said second support member is electrically joined to said second support member.

10. The image display apparatus according to claim 9, wherein an electrode formed on either one of said first and second substrates, bearing said second support member is electrically joined to said second support member via a conductive adhesive.

11. The image display apparatus according to claim 9, wherein an electrode formed on either one of said first and second substrates, bearing said second support member is electrically joined to said second

support member by a contact of a contact portion having spring characteristics, provided on said second support member.

12. The image display apparatus according to claim 2, wherein an electrode formed on a surface of said spacer and an electrode formed on either one of said first and second substrates, bearing said second support member are electrically joined together via said first and second support members.

13. An image display apparatus comprising an air-tight container, and an image display member and a spacer provided in said air-tight container, wherein said spacer is fixed by a weld joining in said air-tight container.

14. The image display apparatus according to claim 13, wherein said spacer has a potential defining electrode for defining a surface potential of said spacer, and a potential of said potential defining electrode is defined by said weld joining to an electrode provided in said air-tight container.

15. The image display apparatus according to claim 13, wherein said spacer is a plate-shaped spacer, and both ends in a longitudinal direction of

said plate-shaped spacer are fixed by said weld joining outside an image display area of said air-tight container.

16. The image display apparatus according to claim 15, wherein said spacer has a conductive member for defining a surface potential of said spacer, and a potential of said conductive member is defined by said weld joining to an electrode provided in said air-tight container.

17. The image display apparatus according to claim 16, wherein said weld joining is made between a conductive first support member provided on said spacer and said electrode.

18. The image display apparatus according to claim 16, wherein said weld joining is made between a conductive first support member provided on said spacer and a second support member provided on said electrode.

19. An image display apparatus comprising an air-tight container, and an image display member and a spacer in said air-tight container, wherein said spacer is fixed via a metal member in said air-tight container.